The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte DAVID A. RABENHORST

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Appeal No. 96-3706
Application 07/854,921[1]

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ON BRIEF

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Before FLEMING, DIXON and GROSS, Administrative Patent Judges.

FLEMING, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-14, 17-25 and 31-35, all of the pending claims in the present application. Claims 15, 16 and 26-30

[1] Application for patent filed March 20, 1992

have been canceled.

The invention relates generally to interactive graphic displays to explore relationships among variables in a multi-dimensional database (specification, page 1, lines 6-7). More specifically, an interactive main display presentation (Figure 2, numeral 200) can access a plurality of other mutually coupled presentations (specification, page 5, lines 17-18). The main display comprises an array of smaller pictorial presentations (Figure 2, numeral 205), each of which displays a relationship between two or more variables in the data base (specification, page 5, lines 18-20). The main display may also have presentations of the variables themselves and/or some function of the variables (specification, page 5, lines 20-22).

The main display presentation provides a global view of the entire database and the current set of transformations and imposed conditions, while subsidiary presentations (Figure 3, numeral 310) provide more detailed and specialized

perspectives of the database (specification, page 6, lines 1-4). Access is provided between presentations (Figure 4) so that subsidiary presentations can be derived from a first subsidiary presentation progeny, or presentation ancestry from which the accessing subsidiary presentation was derived (specification, page 6, lines 10-14).

Mutual coupling (Figure 4, numeral 400) is provided among the variables in the same or different presentations, and occurs if a relationship exists between the displayed variables, points, or other information, either within the same presentation, or in different presentations (specification, page 6, lines 23-25). If two variables are related, a change in the first will cause a change in the second, according to a relationship between them (specification, page 5, lines 26-29).

In an embodiment of the invention, color can be used to visualize the effects of application of logical mathematical operations to displayed data (specification, page 6, lines 30-34) and perform logical color operations

(specification, page 10, lines 5-23; Figure 9).

Independent claims 1 and 18 are reproduced as follows:

1. An apparatus for visually showing a relationship among a plurality of variables on a computer display, each variable comprising a set or vector of observations, the apparatus comprising:

a computer, including the computer display, the computer having a memory containing one or more of the variables and having the capability of displaying visual representations of the variables on the computer display;

a visual array presentation of small presentations on the computer display, each array small presentation visually representing the relationship among a subset of the variables;

a mutual coupling between the array small presentations, some array small presentations having one or more dependent variables related to an independent variable so that a change to the independent variable will visually change all array presentations having dependent variables in accordance with the relationship among the independent and dependent variables; and

one or more mutually coupled subsidiary presentations, each presenting a subset of variables,

whereby a user changes one or more independent variables to view the visual changes to the array presentation in order to determine the relationship among the variables.

18. A method of accessing a second presentation from a first presentation on a computer display by using color comprising the steps of:

a. brushing a first subset of data points chosen by a first selection criteria with a first color in the first presentation;

b. brushing a second subset of data points chosen by a second selection criteria with a second color in the first presentation;

c. performing a logical operation between the first and second subset of data points;

d. identifying the results of the logical operation with an identifying color, the identifying color being any one of the following colors: the first color, the second color, the first and second color combined, and another third color;

e. accessing a second presentation, mutually coupled to the first presentation, using a set of results of the logical operation identified by the identifying color,

whereby a user accesses the second presentation using the results identified by the identifying color.

The Examiner relies on the following reference:

Conrad et al. (Conrad) 4,845,653 July 4, 1989

Claims 1-14, 17-25 and 31-35 are rejected under 35 U.S.C. § 102(b) as anticipated by Conrad[2].

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the Brief[3], Examiner's Answer[4], and Supplemental Examiner's Answer[5] for the respective details thereof.

OPINION

After careful review of the evidence before us, we will sustain the rejection of claims 18-22 under 35 U.S.C. § 102(b) as anticipated by Conrad, and will not sustain the

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[2] In the Advisory Action mailed August 18, 1995, the Examiner withdrew the final rejection of claims 1-14 under 35 U.S.C. § 101. The rejection under 35 U.S.C. § 101 is therefore no longer at issue.

[3] The Brief was received December 11, 1995. No Reply Brief has been filed.

[4] The Examiner's Answer was mailed on January 24, 1996.

[5] The Supplemental Examiner's Answer was mailed on May 15, 2001. Appellant has not replied to the Supplemental Examiner's Answer.

rejection of claims 1-14, 17, 23-25 and 31-35 under 35 U.S.C. § 102(b) as anticipated by Conrad.

It is axiomatic that anticipation of a claim under 35 U.S.C. § 102 can be found only if the prior art reference discloses every element of the claim. See In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). "Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention." RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984), cert. dismissed, 468 U.S. 1228 (1984), citing Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983).

First, Appellant submits[6] that Conrad does not disclose subsidiary displays, independent and dependent variables or relationships between the variables, or mutuality. As regards subsidiary displays, Appellant asserts

[6] Brief, pages 7-8

that Conrad discloses "linking" multiple screens for the simultaneous display of large amounts of data, and there are no second displays accessed or displayed by access criteria applied to the first display. This linking is asserted to be merely visual differentiation of a set

of data events in other data fields corresponding to data events in a created region. Appellant equates this "linking" to his "brushing" process.

Second, Appellant argues[7] that the "linking" of Conrad involves a direct correspondence of data events, i.e., data events correspond when the identical data event appears in two or more fields. Therefore, Appellant avers that there is no suggestion or recognition by Conrad of independent and dependent variables or relationships between the variables.

Third, Appellant argues[8] that while Conrad does disclose a visual differentiation on the other data fields by creating a "created region", it does not disclose a mutual

[7] Brief, page 7

[8] Brief, pages 8-9

coupling of variables, a mutual relationship between the variables, or a mutual relationship of the visible differentiation of the displays.

Addressing limitations present in claims other than claim 1, Appellant asserts[9] that Conrad does not disclose the concept of accessing one or more displays that are not currently displayed, or the use of accessing criteria, e.g., a user

selected presentation format, points and observations. In addition, Appellant asserts that Conrad teaches away from accessing new displays, since the purpose of Conrad is to visualize different displays on the same screen simultaneously.

Specifically addressing[10] claim 17 Appellant asserts that Conrad does not disclose the limitation of the accessing criteria being a user selected format of the second presentation. In regard to claims 18-22, Appellant asserts

[9] Brief, pages 9-10

[10] Brief, page 11

that while Conrad uses combinations of colors, the use of colors to perform logical operations, and using the result of the logical operation to access the second presentation, is not disclosed or suggested by this reference.

Finally, in regard to claims 23-25 Appellant argues that the use of a first presentation to create a new parameter value is not disclosed by Conrad.

The Examiner, in response to Appellant's assertion that Conrad fails to disclose subsidiary displays, points to Conrad[11] which states "in this display of multiple data fields ... the present invention is not limited to viewing data on a single screen, since there are instances when all the desired data may not fit on a single screen ...," and multiple screens may be used or linked for the simultaneous display of large amounts of data...." In addition, the Examiner points[12] to Conrad at Figure 3, elements 0-5, for the disclosure of the screen being updated or changed in response to the data elements.

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[11] Column 5, line 63 through column 6, line 7

[12] Supplemental Examiner's Answer, page 2

As to Appellant's assertion that there is no disclosure of independent and dependent variables or relationships between variables, the Examiner points to Conrad[13] as showing data being displayed in many different forms, such as graphs and charts. The Examiner then alleges that graphs and charts are commonly known to display relationships between independent and dependent variables. In addition, in the Supplemental Examiner's Answer[14] the Examiner points to Conrad[15] and generally notes that "data events touched by a cursor are visualized in different formats at the same time in multiple displays of the screen" and "the user positions cursor 40 over a region of dots on data field 122 to change data elements."

[13] Column 5, lines 48-54

[14] Page 2

[15] Column 7, lines 6-52

In response to Appellant's argument that Conrad does not disclose any mutuality the Examiner points[16] to Conrad[17] which discusses post-display (single or multiple screens) cell property analysis by the user, by pattern recognition, cluster analysis, or heuristic or mathematical techniques. In addition, in the Supplemental Examiner's Answer[18], the Examiner also points to Conrad[19] and generally notes that "data events touched by a cursor are visualized in different formats at the same time in multiple displays of the screen" and "the user positions cursor 40 over a region of dots on data field 122 to change data elements."

In response to Appellant's argument that Conrad does not disclose performing logical operations the Examiner points to Conrad's[20] teaching of using "mathematical techniques," and alleges that since logical operations are a subset of

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[16] Brief, page 5

[17] Column 5, line 63 through column 6, line 5

[18] Page 2

[19] Column 7, lines 6-52

[20] Column 5, lines 65-67

mathematical techniques, logical operations are therefore disclosed. In addition, in the Supplemental Examiner's Answer[21] the Examiner generally notes that linked lists inherently use logical operators.

Finally, in response to Appellant's assertion that the use of a first presentation to create a new parameter value is not disclosed by Conrad, the Examiner points to Conrad[22] and alleges that this section of Conrad teaches the creation of a new parameter value as the result of a mathematical operation whenever Conrad provides display of events which fall outside of measured or calculated parameters.

Turning first to claim 1, we agree with the Examiner that the separate plural displays (22, 24, 26, 28, 30 and 32) on the CRT screen of Conrad are subsidiary presentations as set forth on line 14 of claim 1. Conrad specifically discloses[23] that the cursor is applied to any chosen two-

[21] Page 5

[22] Column 7, line 5

[23] See, inter alia, column 2, lines 62-68

parameter data field and a region is created on that data field. The created region is linked to all data events within that region, and corresponding data events are then delineated, identified or found on all other two-parameter data fields on the screen. Thus, the presentations on the secondary plural displays serve to

supplement the presentation on the first display operated upon by the cursor, and are therefore subsidiary presentations.

We also agree with the Examiner in that Conrad discloses the subsidiary presentations to be mutually coupled as set forth on line 14 of claim 1. As stated in the preceding paragraph, Conrad discloses that the cursor is applied to any chosen two-parameter data field and a region is created on that data field. The created region is linked to all data events within that region, and corresponding data events are then delineated, identified or found on all other two-parameter data fields on the screen. Thus, the plural displays of Conrad are joined and linked together, with delineations of data fields on any screen appearing on all

other screens containing such data, and are thus "mutually coupled."

However, we agree with Appellant that there is no suggestion or recognition by Conrad of independent and dependent variables or relationships between the variables as recited in the last two subparagraphs of claim 1. Even if the Examiner's allegation that it was common knowledge that graphs and charts display relationships between independent and dependent variables is accepted as fact, this does not provide a disclosure of the claimed requisite visual changes of all array presentations or the user changes to determine the relationship among variables.

Therefore, we reverse the rejection of claims 1-14 under 35 U.S.C. § 102 as anticipated by Conrad.

As regards claim 17, we agree with Appellant that Conrad does not disclose the limitation of the accessing criteria being a user selected format of the second presentation. We do not agree with the Examiner that this is taught as being a feature of the linked list. The disclosure of Conrad is devoid of any disclosure that accessing criteria

include a user selected format of the second presentation.

Accordingly, we reverse the rejection of claim 17 under 35 U.S.C. § 102 as anticipated by Conrad.

As regards claims 18-22, we note that Appellant has indicated on page 6, section VII, of the brief that claims 18-22 are grouped together. We further note that Appellant has argued all the claims in this group together[24] and based upon the same arguments.[25] In accordance with 37 CFR § 1.192(c)(7), it will be presumed that the rejected claims stand or fall together unless there is a statement otherwise, and in the appropriate part or parts of the arguments Appellant presents specific reasons as to why Appellant considers the rejected claims to be separately

patentable. We will, thereby, consider claims 18-22 as standing or falling together.

In regard to claims 18-22, Appellant asserts that while Conrad uses combinations of colors, using colors to

[24] Brief, page 11

[25] Brief, pages 10 and 11

perform logical operations and using the result of the logical operation to access the second presentation are not disclosed or suggested by the reference. We do not agree. Conrad discloses[26] the use of plural colors (red, green and blue) to designate data fields in a display, and specifically discloses that different color regions may overlap so that one or more data events may have a combination of colors. Dual color combinations are disclosed to provide yellow, cyan and violet, and if all colors are associated with data events, the combined color is white. In addition, Conrad discloses[27] that access to these corresponding data events in the other fields carries with it the color coding of the identified data events within the region of the data field and all corresponding data events in remaining data fields 24, 26, 28, 30 and 32 appear on the screen in the same color. Thus, the combination of the base colors performs a logical "AND" operation between the first and second subset of data points, and the

[26]Column 9, lines 45-64; Figure 5

[27]Column 9, lines 2-16

resultant combination color identifies the results of the logical operation, and is used by the observer to carry out data analysis.

We note that Appellant has not argued that Conrad failed to teach any of the other limitations of these claims. Appellant has chosen not to argue any other specific limitations of the claims as a basis for patentability. We are not required to raise and/or consider such issues. As stated by our reviewing court in In re Baxter Travenol Labs., 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991), "[i]t is not the function of this court to examine the claims in greater detail than argued by an appellant, looking for nonobvious distinctions over the prior art." 37 CFR § 1.192(a) as amended at 58 CFR § 545 Oct. 22, 1993, which was controlling at the time of Appellant's filing the brief, states as follows:

> The brief ... must set forth the authorities and arguments on which the appellant will rely to maintain the appeal. Any arguments or authorities not included in the brief may be refused consideration by the Board of Patent Appeals and Interferences, unless good cause is shown.

Also, 37 CFR § 1.192(c)(8)(iii) stated:

> For each rejection under 35 U.S.C. 102, the argument shall specify the errors in the rejection and why the rejected claims are patentable under 35 U.S.C. 102, including any specific limitations in the rejected claims which are not described in the prior art relied upon in the rejection.

Thus, 37 CFR § 1.192 provides that just as the Court is not under any burden to raise and/or consider such issues this Board is not under any greater burden.

In view of the foregoing, the decision of the Examiner rejecting claims 18-22 under 35 U.S.C. § 102(b) is affirmed.

As regards claim 23, we agree with Appellant[28] that accessing of the database as claimed is not disclosed by Conrad. The Examiner's general statement[29] that this an operating feature of multiple parameter analysis fails to pointout where the specific features of the claim language are disclosed by Conrad, and we find no such disclosure in Conrad.

In regard to claim 31 we note that section c. of this claim requires "accessing and displaying a first visual

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[28] Brief, page 10

[29] Supplemental Examiner's Answer, page 7

subsidiary presentation of data, defined by ... a user selected subsidiary presentation format ..." (emphasis added). We agree with Appellant that Conrad does not disclose the limitation of the accessing criteria being a user selected subsidiary presentation format. We do not agree with the Examiner that this is taught as being a feature of the linked list, or by events in other data fields being coded. The disclosure of Conrad is

devoid of any disclosure that accessing criteria include a user selected subsidiary presentation format.

In regard to claim 34, we note that section d. of this claim requires a relationship of dependent variables to independent variables as claimed. We again agree with Appellant that there is no suggestion or recognition by Conrad of independent and dependent variables or relationships between the variables as recited in this claim. Even if the Examiner's allegation that it was common knowledge that graphs and charts display relationships between independent and dependent variables is accepted as fact, this does not provide a disclosure of the claimed requisite means for mutually

coupling variables due to one or more dependent variables related to an independent variable to provide the requisite change.

In our consideration of the function of the claimed "means for mutually coupling" in claim 34, we find that the function is not the same as that disclosed by Conrad. Therefore, although the pending claim contains means-plus-function language that requires analysis of the claim under 35 U.S.C.
§ 112, sixth paragraph, no further analysis is required once it has been determined that the claimed function is not the same as that disclosed by the applied reference. See Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d 1250, 1258, 52 USPQ2d 1258, 1263 (Fed. Cir. 1999).

Accordingly, we reverse the rejection of claims 23, 31 and 34 under 35 U.S.C. § 102 as anticipated by Conrad.

CONCLUSION

We have sustained the rejection of claims 18-22 under 35 U.S.C. § 102(b) as anticipated by Conrad, and have reversed the rejection of claims 1-14, 17 and 31-35 under 35

U.S.C.

§ 102(b) as anticipated by Conrad.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

MICHAEL R. FLEMING Administrative Patent Judge	)	
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